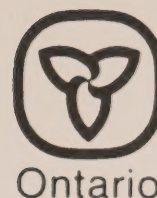


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NIAGARA REGION STUDY REVIEW COMMISSION

FIRE PROTECTION IN THE NIAGARA REGION

A Background Report Prepared by:

Roderick Church
Department of Politics
Brock University
November 1976

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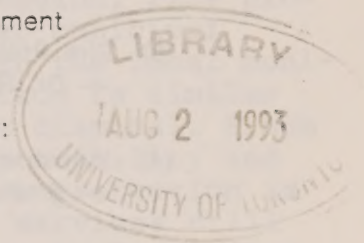
NIAGARA REGION STUDY REVIEW COMMISSION

FIRE PROTECTION IN THE NIAGARA REGION

Municipal Fire Departments and Patterns
of Cooperation under Regional Government

A Background Report Prepared by:

Roderick Church
Department of Politics
Brock University
November 1976



James Carrie assisted with the research for this report. The report has been prepared upon request of William L. Archer, Commissioner, appointed in August 1975 by the Treasurer of the Province of Ontario to undertake an independent study review of local government in the Region of Niagara.

The conclusions presented in this Background Report do not necessarily reflect the views of the Niagara Region Study Review Commission.

The final report of the Commission will be submitted to the Treasurer of the Province of Ontario on or before January 15, 1977. After that date, inquiries should be made to the Local Government Organization Branch, Ministry of Treasury, Economics and Intergovernmental Affairs, Queen's Park, Toronto (965-6934).

The following Background Reports have been prepared for the Commission and are available from the Commission offices or the Ministry of Treasury, Economics and Intergovernmental Affairs:

- (1) Electoral System in the Niagara Region
— M. J. Powell
- (2) Environment Ministry — Farm Tax Rebate: Two Case Studies, Provincial Municipal Relations in the Niagara Region
— Smith, Auld & Associates Ltd.
- (3) Fire Protection in the Niagara Region
— Dr. R. Church
- (4) Industrial Promotion in the Niagara Region
— Smith, Auld & Associates Ltd.
- (5) Land Use Planning in the Niagara Region
— Dr. J. N. Jackson
- (6) Mass Media in the Niagara Region
— Dr. W. H. N. Hull
- (7) Municipal Organization in the Niagara Region
— Dr. R. Church
- (8) Public Finance in the Niagara Region
— Dr. Lewis A. Soroka

PREFACE

This report is an out-growth of a larger study of municipal organization in the Niagara Region. Originally, there was no intention to focus on fire protection, but early explorations of the subject revealed an interesting story which gradually expanded until it warranted a separate, more detailed report.

Under regional government in the Niagara Region, fire protection is organized differently than other municipal services. Primary responsibility lies with the local municipalities, and in this sense fire protection is similar to such services as recreation and garbage disposal. Since ambulance service is now a Provincial responsibility and policing is a Regional responsibility, fire protection is the only one of the traditional emergency services still under local municipal control. In addition to local fire departments, however, there is also a Regional Fire Coordinator appointed by the Regional Municipality with limited responsibilities for cooperation among municipal departments in emergencies. This division of responsibilities with regard to fire protection was first developed for the Niagara Region, and the pattern has since been extended to other regional government systems in Ontario.

In examining the system of fire protection in the Niagara Region, this report does not make a detailed assessment of the adequacy of fire protection facilities in individual departments. This would require a consideration of manpower, the age and capacity of equipment, station locations, response times, hydrants, water pressure and other factors. The results would be interesting, but these reasonably technical matters can perhaps best be left to local fire authorities and the Ontario Fire Marshal. The Fire Marshal's office already conducts confidential fire protection surveys at the request of individual municipalities. Even if a highly technical study were undertaken, results are not likely to answer general questions. For example, recently the Bureau of Municipal Research published a study of fire protection in Metro Toronto entitled Fire Protection Services in Metro: Is Unification the Answer? (Toronto 1975). The Study emphasized technical matters, but it could not really answer the question it posed. Compared to Metro Toronto, the Niagara Region, with its mixture of urban and rural areas, full-time and volunteer fire departments, is a much more complex situation.

What this study does do is present some of the general information needed to begin to understand the adequacy of the fire protection system in the Niagara Region. It presents some data on the structure and performance of the municipal departments, and it examines the patterns of cooperation among departments and the role of the Regional Fire Coordinator. It emphasizes the effects produced by the introduction of regional government in 1970, and it discusses some possible alternative lines of future development.

This report reaches no firm conclusions about the future. One reason is that changes will require the cooperation and support of citizens and firemen, as well as local, Regional and Provincial governments. People themselves must become aware of fire protection and perceive the need for change, because fire protection, especially when volunteers are involved, is a very "political" activity. There is no doubt that "politics" plays a role in the fire protection system of the Niagara Region. One fire chief remarked, "The whole thing is politics when you come right down to it. It's too bad, it shouldn't be that way." After emphasizing the importance of "politics", a former fire chief commented sympathetically: "You can write all the reports you want. Nothing is going to happen." Perhaps nothing will happen, but hopefully citizens and those responsible for fire protection will decide to do nothing only after they have openly discussed and considered some of the issues raised in this report.

Special thanks are due to the fire chiefs and other people who gave so freely of their time and knowledge and thereby made this report possible. James Carrie very ably assisted with the research, and a number of others have contributed in various ways to the production of this report. Errors which remain are, of course, my responsibility.

R.C.

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SUMMARY

Chapter I sketches the background and general context of fire protection in the Niagara Region. In 1966 the Niagara Region Local Government Review (Mayo) Commission recommended that fire protection be a local responsibility, but that a regional municipality be given an important role in such areas as communications, planning and training. The Provincial Government largely ignored this advice, in part because of opposition from smaller municipalities and volunteer firemen. With the introduction of the Regional Municipality of Niagara in 1970, fire protection remained almost exclusively a local responsibility. A minimal Regional presence is provided by having the Regional Council appoint a Regional Fire Coordinator who has the responsibility to coordinate area fire departments in the event of a major emergency.

Fire protection does not appear to be a special problem in the Region. Municipal briefs to the current Review Commission praise the present system and see the need for few if any changes. Municipalities are concerned that a Regional fire department would increase costs and jeopardize the role of the volunteer firefighter. A comparison of fire protection costs and fire losses suggests that the Niagara Region does not do a markedly worse job of fire protection than other regional areas.

Two factors suggest that municipal fire departments throughout Ontario may provide less than optimal protection. One factor is insurance. Insurance rates only imperfectly reflect real or probable fire losses in a municipality, and therefore these rates do not necessarily provide the incentive for municipalities to do a good job of fire protection. Municipalities try to beat the insurance system, with the result that less is spent on fire protection than

should be the case. Another factor is the Province's limited role in ensuring the adequacy of fire protection. The Ontario Fire Marshal gives advice only when asked, and municipalities regularly ignore the advice that is given. Also, the Fire Marshal is not in a position to give advice which has a regional, as opposed to local, orientation.

Chapter II examines the organization, programs, staffing and performance of the Region's twelve municipal fire departments. The reduction in fire departments from twenty-two to twelve in 1970 created a number of opportunities for change, but some municipalities (e.g. Thorold and Fort Erie) have still failed to develop integrated departments. Little rationalization of fire station locations has taken place. Apart from two changes in Niagara Falls, the Region is served by the same stations it was served by under the old municipal jurisdictions. In West Lincoln efforts to develop new stations have failed, and the municipality's one station must cover an area several times larger than that of any other station in the Region. Within municipalities there has been some redrawing of fire station jurisdictions as a result of the 1970 amalgamations, and this has improved fire protection for some areas. However, station jurisdictions are not always as rationally defined as they could be.

Fire protection programs and inspections are an essential ingredient of effective fire protection, but many municipal departments have inadequate programs and inadequately trained staff.

The use of volunteer firefighters continues to be an issue in the Region. All twelve municipalities use volunteers and the number of volunteers has increased in the past decade, despite the larger fire departments created in 1970. This suggests that volunteers will continue to play an important role in fire protection in the Region for some time to come, even if a Regional fire department is created. The primary advantage of volunteers is economic. Some municipalities run two or more companies of volunteers for less than the approximately \$80,000 per year it takes to keep one full-time fireman on the job around the clock.

However, the conditions which permit effective volunteer fire companies are changing in many ways. Today volunteers are more likely to work, visit and holiday outside their own community, and they are therefore less likely to be available for duty. Employers may also be less willing to let employees off work to respond to calls. Already there is sometimes a problem in getting enough men to respond to calls in late afternoon when shifts are changing. With modern buildings and industrial accidents, training has become more important than it was before, but many volunteers do not receive much training.

Fire protection costs and fire losses, calculated on the basis of both population and equalized assessment, provide some insight into the effectiveness of municipal fire protection. Cities employing full-time firemen spend more than those municipalities relying exclusively on volunteers, but they usually have lower fire losses as well. When municipalities are ranked by total real fire costs — expenditures on protection plus fire losses — differences between volunteer departments and those with some full-time men often disappear. Pelham and Niagara-on-the-Lake have the lowest total costs; West Lincoln, Niagara Falls, Wainfleet and Fort Erie have the highest.

Chapter III examines the patterns of cooperation among municipal fire departments. Cooperation scarcely goes beyond what existed prior to 1970. The old, county-based system of mutual aid has been extended to the Region, but emergency planning is rudimentary, aid is not "automatic" and only major emergencies are covered.

Fire departments will not normally respond to calls outside their municipal boundaries, and this means that some areas in the Region are not protected by the closest fire station. There is only one intermunicipal agreement (between Thorold and Pelham) to handle a border area, and this agreement originated prior to 1970. In most other areas, border agreements have not become a public issue, and fire chiefs seem to take little interest in the matter. The Gainsborough area of West Lincoln now bears higher insurance rates because of the failure of West Lincoln and Pelham to agree on a plan to have Pelham protect the area. No one (including the Ontario Fire Marshal) currently has responsibility for intermunicipal agreements which could improve fire protection for border areas.

Communications and dispatching continue to be decentralized. Each of the old county areas still has its own radio frequency. The St. Catharines control room handles the dispatching for Grimsby, Lincoln and Niagara-on-the-Lake, but other municipalities operate on their own, and there is some distrust of centralized dispatching. A central emergency number (911) is spreading rapidly in Canada and has been recommended for the Niagara area by the Police Board. However, Regional Council has shelved the matter for the present, and some fire departments remain apprehensive. Firemen's misgivings about a 911 system are coupled with misgivings about centralized dispatching, but they are also linked to misunderstandings about 911 and a distrust of the police who would manage the system.

There is little cooperation in training among municipal departments, even though there is some support in principle for such cooperation. Poor communications and a lack of initiative are part of the problem. The continued existence of two firemen's associations which are based largely on old county lines suggests the difficulties in establishing Regional patterns of cooperation.

Chapter IV briefly examines the reasons why the Regional Fire Coordinator has not done more coordinating than he has. One factor is the part-time nature of the job (thus far, the Coordinator has also been the St. Catharines fire chief). Another is the lack of interest shown by the Regional Finance Committee. A basic problem is the lack of statutory authority. The Coordinator's responsibility to establish an "emergency plan and program" does not extend to such things as communications, training, and inspections. If the Coordinator were to interpret his mandate more broadly, there is reason to believe there would be opposition from some municipal fire departments.

Chapter V concludes by observing there are more problems in fire protection than municipalities acknowledge. Some of these problems are probably not unique to the Niagara Region, and this suggests the need for the Province to examine the whole subject of fire protection.

The Niagara Region has three basic options. One is to leave the current structure of fire protection responsibilities unchanged. This is not likely to lead to many changes in fire protection, although greater public interest might lead to some improvements. A second option is a Regional fire department. Although this option may be premature for technical as well as political reasons, it would make sense to study the implications more fully. The third option is to increase the authority of the Regional Fire Coordinator and give him a role in communications, training, inspections and other matters. If this were done, there would be a need to give further thought to the selection of the Coordinator and the staffing of programs.

CHAPTER I

THE NIAGARA REGION AND FIRE PROTECTION

Does the Niagara Region have a fire protection problem? The question is simple to ask, but almost impossible to answer. There certainly are some general problems with fire protection in Ontario, and there are a number of problems with fire protection in some areas of the Region, but it is very difficult to say whether the Region as a whole has a problem which could be solved by having the Regional Municipality become more active in fire protection. As this chapter will note, there are few complaints about the present system of fire protection in the Region. Also, the limited statistical evidence suggests the Region is not out of line with other areas. However, there is a legacy of concern with fire protection in the Region, and there are some general reasons why people should not be complacent about the existing state of affairs. Many people assume that fire protection can safely be considered a local problem and that the Province, through the Ontario Fire Marshal, will ensure that the general interest is protected. These assumptions have only limited validity.

A. Historical Background

The adequacy of fire protection in the Niagara Region was raised as an issue in 1965-66 during the investigations and hearings of the Niagara Region Local Government Review Commission (Mayo Commission). At that time twenty-two of the twenty-six municipalities in Lincoln and Welland Counties maintained their own fire departments. All but St. Catharines, Niagara Falls, Welland, Port Colborne and Thorold relied exclusively on volunteers, and even these departments used volunteers extensively. Expenditures on fire protection varied considerably. The rural townships spent little (Gainsborough Township spent nothing), while the cities spent many times the rural average. The fire departments in each county were linked in a very limited way through mutual aid systems. Under mutual aid, each

county had a common radio frequency and there were agreements to assist neighboring municipalities within the county in emergencies. The chiefs of the largest departments in each county (St. Catharines and Niagara Falls) served as County Fire Coordinators, but their responsibilities were minimal.. Many of the smaller departments did not yet have radio equipped trucks.¹

In their briefs to the Mayo Commission the two largest cities raised the question of a regional fire department. St. Catharines said the possibility warranted further study. It acknowledged that volunteer departments were providing good service and added that "under a regional fire department these organizations could continue for the time being, with the additional advantage of a central communications system and support service when required." Niagara Falls pointed out that mutual aid was voluntary and that there would be an "advantage, in the event of a major fire, in having a Regional Fire Chief". The City's brief added:

if there were a Regional Fire Headquarters with an established chain of command, the fire protection services would be improved. If a Regional Fire Department were established there should be strategically located fire stations throughout the Region.

Only two other municipalities mentioned fire protection in their briefs. Crowland Township had no fire department of its own but expressed satisfaction with the service it received from Welland and Thorold. Wainfleet Township alone thought to defend the existing system. It saw no problems in Welland County and pointed with pride to several excellent volunteer forces which rivalled full-time professional forces and which provided effective service at minimal cost.

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1. This and the following two paragraphs are based on municipal briefs to the Niagara Regional Local Government Review (Mayo) Commission, copies of which can be found in the Brock University Library, and on the two main publications of the Commission: Data Book of Basic Information (Toronto, 1965), pp. 27 and 37; and Report of the Commission (Toronto, 1966), pp. 29-30.

In its Report, the Mayo Commission noted the apparent lack of public concern with fire services, but it proceeded to identify a number of "potential problems". One was the great variation among municipalities in per capita expenditures on fire protection and "a vast disparity in the quality of service offered". A second potential problem was the widespread dependence on volunteers. "Total reliance on volunteer forces may be necessary in rural areas under the present system of local government, but becomes less desirable with urbanization." Another problem was the limited nature of cooperation among municipal fire departments. The Commission did not believe these problems warranted the amalgamation of existing departments into a regional fire department. The Commission accepted the idea that fire protection required decentralization and should therefore be essentially a local responsibility, but it also agreed with the view of St. Catharines and Niagara Falls that there were aspects of fire protection which could better be performed on a regional basis. As possible regional responsibilities, it suggested: "supervision of standards, training, siting of stations, purchasing, dispatching, capital financing and general coordination." The Commission did not specifically suggest the creation of a regional fire department but neither did it suggest what organizational arrangements might be used to carry out these responsibilities.

Municipal reactions to the Mayo Commission's recommendations on fire protection were mixed and were often lost in the general reaction to the sweeping proposals for the reorganization of local municipalities and the creation of a strong Regional Municipality.² St. Catharines and Niagara Falls indicated approval of the proposed regional role in fire protection, while the Village of Fonthill, the Towns of Thorold and Beamsville and Welland County seemed to favor making fire protection exclusively a regional responsibility. The more common reaction was to acknowledge some need for more cooperation, but to reject

2. This paragraph and the following one are based on municipal briefs to the Minister of Municipal Affairs following the publication of the Mayo Commission Report in 1966. Copies of the briefs are available in the Brock University Library.

a regional fire department and to defend local fire departments. The Cities of Welland and Port Colborne, the Town of Niagara, the Village of Chippawa, and Niagara and Humberstone Townships all commented in this vein.

The most detailed and opinionated comment came from Lincoln County in a brief prepared by the accounting firm of Joscelyn, Laughlin, Franklin, Tucker & McBride. This brief was endorsed by a number of local municipalities in the county and the portion on fire protection is worth quoting at length.

The main recommendation of the Review Commission is the formation of a regional fire department, which would coordinate fire services and would assume responsibility for supervision of standards, training, location of stations, purchasing, dispatching and capital financing. The cost of setting up such a regional fire department would be \$75,000.00 per annum. While the Review Commission does not actually suggest that the regional fire department would eventually be staffed by full-time firemen, it would appear that it is leaning in that direction.....

We have discussed the subject of fire services with residents of the Niagara Region and as a result have concluded that the present services rendered by the various fire departments are satisfactory and are being provided at a minimum cost. The introduction of the Mutual Aid System is just another example of the spirit of cooperation that exists between the various fire departments in the Niagara Region. The formation of a regional fire department is an unnecessary luxury that would start out costing an additional \$75,000.00 per annum and would, in all probability, increase to an additional \$2,000,000.00 per annum within the first five years, when all the volunteer firemen resigned or were replaced as a result of the over-zealous actions of a regional fire chief and his training officers.

It is interesting that only costs are considered. Even if these estimates are accurate, the brief ignores the question of how this expenditure would affect the quality of protection, fire losses and insurance rates. An expenditure of \$75,000 per year, or even \$2,000,000, might be a very good investment.

B. The Regional Municipality of Niagara Act

In the face of local opposition, the Province decided to leave the Mayo Commission's suggestions on fire protection out of The Regional Municipality of Niagara Act. The Province wanted to establish a Regional Municipality and it did not want to provoke more resistance than was necessary. The volunteer firemen made sure their MPPs and the Cabinet knew the volunteers were opposed to any change to a Regional fire department. Given the number and potential political influence of these volunteers, the Province decided that a strong Regional role in fire protection was not a high priority. The RMN Act left responsibility for fire protection almost exclusively at the local level. The main impact of the RMN Act on fire protection therefore came indirectly through the reduction in the number of area municipalities from twenty-six to twelve. This forced the amalgamation of many local fire departments and opened up the possibility of stronger departments and a somewhat more effective distribution of resources.

There was only one innovation at the regional level. Under the RMN Act, Regional Council must appoint a Regional Fire Coordinator who is responsible for the "establishment of an emergency fire service plan and program for the Regional Area". Unlike the counties, the Region was free to appoint anyone it chose as Fire Coordinator. Also, the words "and program" represented an extension of the responsibilities previously expected of a County Fire Coordinator under voluntary systems of mutual aid. The new mandate was clearly limited to emergencies, but even this limited Regional responsibility was a break with previous practice. Metropolitan Toronto and the Regional Municipality of Ottawa-Carleton, the two metropolitan governments created prior to the Regional Municipality of Niagara, have no responsibilities at all in fire protection. The RMN Act therefore broke new ground and set a pattern that has been followed in subsequent regional reorganizations.

C. Current Concerns

To judge from briefs and comments to the Niagara Region Study Review (Archer) Commission in 1976, the system of fire protection in the Region is working satisfactorily. There have been few specific complaints or suggestions registered by individuals. Six of the eleven municipal

briefs (see the Appendix to this report) specifically mention fire protection, and all are strongly against regionalization and in favour of local responsibility. Naturally, the municipalities have an obvious interest in justifying their own performance in the area of fire protection, but it is interesting that St. Catharines and Niagara Falls see less need for a Regional role in fire protection than they did a decade ago. What explains this change in attitude? Are things really operating better than they were before, or is fire protection being judged less critically because of a general concern with the costs of Regional Government and the loss of "local autonomy"?

The main concern of municipal briefs is to argue against a Regional fire department. One reason is cost. St. Catharines, Welland, Niagara Falls and Pelham feel that Regional involvement in the operations or administration of fire protection would only increase costs without any increase in service. No firm evidence is offered to support this contention. Niagara Falls does argue that costs would escalate because payments to volunteer firemen vary considerably and these would have to be equalized. Also, new communication facilities would be required. Pelham cites the example of the Regional Police to justify its concern about increased costs without increased services. St. Catharines simply refers to "history" and Welland to "past experience" for support, but undoubtedly they also have the Regional Police in mind. Whether these municipalities have investigated the Regional Police situation thoroughly is not clear. Judging by the very dated nature of the stories about the Police that one hears, they have not. They certainly have not compared the police and fire protection systems with any thoroughness, nor have they undertaken any detailed investigations to see how a Regional fire department and increased expenditures might lower fire losses or reduce insurance rates.

A second reason municipalities oppose a Regional fire department is that it would jeopardize the volunteer fire department. Not only would the disappearance of the volunteers presumably increase costs, but Niagara Falls, Port Colborne and Wainfleet argue that this would deprive the local community of a valued social organization. It is not clear why a Regional fire department would mean the

end of volunteers. Many departments, including those in Niagara Falls and Port Colborne, have combined full-time firemen and volunteer companies for years. The only reason Port Colborne offers is that employers would not likely continue to permit volunteers to be called out over long distances. Why this would be the case is not clear.

In a more positive vein, Pelham expresses pride in the quality of its volunteer department, while Niagara Falls and Welland express satisfaction with the mutual aid system. Niagara Falls states that "municipal boundaries have not created any difficulties in providing fire-fighting services". Wainfleet notes "a regional association which exists to assist all local organizations in the area municipalities in the provision of training seminars." Unfortunately, these last two statements are not entirely accurate. As a later chapter will note, municipal boundaries do create problems. Also, there is not one regional association, but two competing ones, and training is still a problem for some departments.

The only real suggestion for change in the present system of fire protection concerns communications. St. Catharines asks that "the Review Commission examine the feasibility of a single communications centre for the receipt of calls, the transmission of alarms and the dispatching of fire apparatus". This is supported in part by Wainfleet which suggests a study of a single communications network, perhaps linked to the police and related to a general purpose emergency call system such as 9-1-1. The only negative comment in this regard comes from Niagara Falls when it says "the centralization of the fire departments would require a new communications system entailing considerable expenditure of public money without a notable increase in the level of fire fighting service". Niagara Falls offers no evidence to back its assertion. In any case, St. Catharines and Wainfleet envisage a centralized communications system without a centralized or Regional fire department. The only problem with the St. Catharines and Wainfleet proposals is why it should be up to the Review Commission to examine the question. A central communications system is obviously "feasible", and nothing should now prevent municipalities from studying its desirability.

D. The Niagara Region in Comparative Perspective

Does the Region really do as good a job in fire protection as the municipal brief suggests? This will be explored in more detail later, but it may be instructive at this point to make some general statistical comparisons with other areas.

These comparisons must be undertaken cautiously. The information which is available on a comparative basis is limited and subject to error. For example, when fire losses are uninsured, the value of the loss is not confirmed by an insurance adjuster, but only estimated by the fire department, which may underestimate it to make its own record look better. Every department also lists trucks and equipment on its roster which are out-dated and never used. Another problem is that most evidence relates only to what a fire department does, not to the difficulty of its task. Every municipality is different in terms of its building materials, settlement and traffic patterns, social habits, and the endless number of other things which affect the incidence and severity of fires. These problems do not mean that one should ignore the information that is available. For example, expenditures on fire protection and the value of property destroyed by fires are commonly used to assess the capacity and performance of fire departments. These are far from perfect measures, but they help to illuminate the situation.

When statistical comparisons are made, the Niagara Region as a whole does not fare badly. Table 1 presents the most recent, readily available data on fire department costs and fire losses in the Niagara area and three other Ontario regional areas. On a per capita basis, Metro Toronto area fire departments spent the most in 1972 and Niagara departments the least, but Niagara figures are comparable to those for the Waterloo region which also has a mixture of rural and urban areas and of volunteer and full-time fire departments. In terms of fire losses, the Niagara Region has a much higher level than the entirely urban area of Metro Toronto, but it has a lower level than Ottawa-Carleton. Figures for Niagara are comparable to those for the Waterloo area. The Niagara figures are higher than the Waterloo ones, but the Niagara Region has a larger area and a more scattered settlement pattern,

TABLE 1 FIRE PROTECTION COSTS AND FIRE LOSSES IN THE
NIAGARA REGION AND OTHER SELECTED REGIONAL AREAS

Regional Area	1972 Fire Dept. Costs per capita	1971-75 Average Fire Losses per capita	1975 Fire Losses per capita
Metro Toronto	\$18.58	\$ 8.82	\$ 8.88
Ottawa Carleton	18.15	16.50	22.26
Waterloo	13.51	11.89	15.28
Niagara	12.83	13.95	15.70
Ontario (Province)	n.a.	n,a	15.99

Sources: Calculated from data in Ontario, Ministry of Solicitor General, Office of the Fire Marshal, 1973 Handbook of Municipal Fire Protection in Ontario (Toronto, 1973), and Fire Losses in Ontario 1975 (Toronto, 1976). The regional average per capita costs for fire departments in the 1973 Handbook are calculated incorrectly. Regional averages have been recalculated for this table.

and these factors could account for the difference. Fire losses in the Niagara Region are slightly below the average for Ontario.

Of course, these figures do not prove that the system of fire protection in the Niagara Region is functioning well; they only suggest things are not markedly worse than elsewhere in Ontario. This is an important distinction. There is no regional fire department in the Province and the collections of municipal fire departments within regions operate under the same general conditions. It is quite possible that most of the "regional systems" are providing less than optimal levels of protection and efficiency.

E. The Insurance Incentive

One reason to be concerned about the adequacy of the general level of fire protection in Ontario is the economic conditions under which fire departments operate. Ideally, there should be no problem — at least as long as communities are separate enough to prevent fire spreading from one to another. The reasoning is simple. Fire protection makes good economic sense. If there is no system of fire protection, fires will be frequent and each fire will run its natural course and cause considerable losses. It therefore makes sense to invest in both fire prevention and fire-fighting programs. These cost money, but the rational thing to do is to invest in protection as long as an additional dollar of protection results in an equal or greater reduction in the value of losses that could be expected without this protection. The objective is to minimize the combined costs of fire protection and fire losses. In theory, rational people or municipalities will provide that level of protection which is best suited to their situation. If they do not, they will bear the consequences and this will have no impact on other municipalities. Unfortunately, things are not so simple.

What complicates this picture is fire insurance. Insurance is not designed to reduce fire losses on an overall basis, only to spread the risk of losses and reduce the impact on individuals. Once insurance exists, the sensible individual or community does not try to minimize the combined costs of fire protection and fire losses but the combined costs of fire protection and fire insurance. As long as

insurance rates reflect a community's real or probable fire losses, insurance will have no overall impact and the community should have the same concern with fire protection and spend the same amount of money as it would if it had to absorb the fire losses directly.

The problem is that fire insurance rates do not accurately reflect real or probable fire losses on a municipal basis. There are many reasons for this and only a few can be touched on here. One is the sheer number of fire departments and insurance companies and therefore the costs of gathering information on which to base rates. The quality of a municipal fire protection system is only one factor which affects an individual insurance premium and it simply is not possible to keep track of all the changes which are taking place at the municipal level. The insurance industry does support research on the quality of fire departments in Canada through the Public Fire Protection Survey Service, a unit of the Insurance Bureau of Canada. Municipal fire departments are given an overall rating for insurance purposes, but except for major policies, this rating is a simplified one which does not make fine distinctions and which is not subject to much change. All larger municipalities with full-time firemen, hydrants, and stations no more than ten miles apart almost automatically get a top rating. Insurance rates are also set on a Province-wide basis. Presumably, if insurance rates do not accurately reflect expected losses, competition among insurance companies will reduce these rates. The mechanism works imperfectly when companies rely on the same information and research. The basic problem, of course, is that the insurance industry and individual companies are only concerned with covering losses and making a profit. They are not necessarily concerned with seeing that insurance rates accurately reflect probable losses in particular cases.

As a result of the imperfections in the insurance system, municipalities try to beat the system and this inevitably produces an overall level of fire protection that is less than optimal. On the one hand, even though improvements in fire protection may more than pay their way in terms of reduced losses, a municipality will not invest in them because its insurance rates may not be substantially reduced. On the other hand, once a municipality has

acquired a certain fire protection rating for insurance purposes, the fire budget will be under constant pressure because the deterioration in fire protection may not be noticed by insurance companies for some time and the city may not suffer. One reason that there is little public discussion of fire protection in municipalities is that municipalities want to keep things quiet in order that insurance companies do not know what is going on. All of this is understandable enough, because a municipality does stand to gain by these tactics in the short run. It gains, however, by unfairly shifting the burden of paying for fire losses to others. In the long run, many municipalities try to beat the system and everyone loses. Individually and collectively, municipalities will not provide the real optimum level of protection, losses will be unnecessarily high, and individuals will end up paying more in insurance than they saved in taxes.

F. The Fire Marshal and Provincial Control

The inability of municipalities pursuing their own interests to provide an optimum level of fire protection in the Province as a whole is not a unique situation. It occurs in many areas of municipal activity and it is a major justification for Provincial control and regulation of local activity.

In Ontario, however, the Provincial Government plays a limited role in ensuring the adequacy of fire protection. This contrasts markedly with police protection where there is The Police Act, a strong Ontario Police Commission, the Ontario Provincial Police and a system of subsidies to municipal forces. Under The Municipal Act, fire protection is not even a mandatory activity, and municipalities can choose to provide fire protection or not. Naturally, most municipalities do provide fire protection, but the Provincial Government does not provide subsidies to municipalities for fire protection and it cannot compel a municipality to meet a set of Provincial standards in terms of the quality of fire protection it provides. Provincial legislation could change this situation, but the Province's position at present is that fire protection is primarily a local responsibility.

This is not to say the Province plays no role in fire protection. Under The Fire Marshals Act, the Ontario Fire

Marshal and his staff have a number of powers and responsibilities. Among other things, the Fire Marshal's office: runs a training school and training programs for fire-fighters; lays down standards for hydrants, hose couplings and other equipment to ensure intermunicipal compatability; keeps records and statistics on fires based on information which local fire departments and insurance companies must provide; investigates explosions, major fires, and all suspected cases of arson; inspects buildings and compels the removal of hazards, usually through municipal fire chiefs who are automatically considered assistants of the Fire Marshal for inspection purposes.

The Fire Marshal is also empowered to confer with municipal councils and officials, to assist them in organizing their fire departments, and to make recommendations with regard to equipment, operations and by-laws. However, the Fire Marshal has no direct authority over municipal fire departments. In fact, the Fire Marshal will undertake a fire protection survey of a municipality and make recommendations for improving fire protection only if the municipal council requests this. The Fire Marshal's report is then a confidential document, and the municipal council is under no formal obligation to implement any of it.

Municipalities do regularly ignore the Fire Marshal's recommendations. For example, the Fire Marshal's office has conducted a number of fire protection surveys in the Niagara Region in recent years. Thorold and Pelham requested surveys prior to 1970, and subsequently there have been surveys for Grimsby (1970), Niagara (1971), West Lincoln (1972), Welland (1973), and Fort Erie (1973). Normally, these surveys are confidential, and it is impossible to know exactly how far their recommendations have been followed. In some instances, however, it is quite obvious that recommendations have not been followed.

Another important point to note about the Fire Marshal's advice is that it does not, and legally it cannot, take a Regional perspective on fire protection problems. Because fire protection is a local responsibility and fire protection surveys are done for municipalities (albeit at Provincial expense), advice and recommendations are geared

solely to the problems and possibilities within the boundaries of a particular municipality. The fact that a neighboring municipality has a fire station nearby, or that an area just outside the municipality is poorly protected, will not be taken into account. At present the Fire Marshal could not even undertake a fire protection survey for the Niagara Region as a whole unless all twelve area municipalities asked him to do so. The implications of this are reasonably serious. Even if a Regional Fire Department is not a good idea at present, it might well be some day, and presumably someone should be in a position to help the Region to decide about and prepare for the change. At present the Fire Marshal is not in that position and neither is anyone else.

CHAPTER II

THE MUNICIPAL FIRE DEPARTMENTS

In the Niagara Region, responsibility for fire protection rests almost exclusively with the fire departments of the twelve area municipalities. As one would suspect, these departments vary tremendously. At one extreme, the St. Catharines fire department fights an average of about ten building fires per week, employs over one hundred full-time firefighters and spends a multi-million dollar budget. At the other extreme, Wainfleet's small volunteer force fights an average of only one fire every two weeks on a budget about 1% the size of that in St. Catharines. These differences reflect the very great differences in the population and character of the two municipalities. Table 2 presents some general information on all the Region's fire departments, and the overall pattern of differences between large and small municipalities is quite clear. There are exceptions to the pattern, however, and there is still the question of the adequacy of the different departments. This section will therefore examine the organization, programs, staffing and performance of the twelve departments in more detail.

A. Departmental Organization

The Region's twelve municipal fire departments were created in 1970 out of twenty-two separate municipal departments. This major consolidation of fire departments provided a number of opportunities for changes and improvements in the organization and deployment of forces.

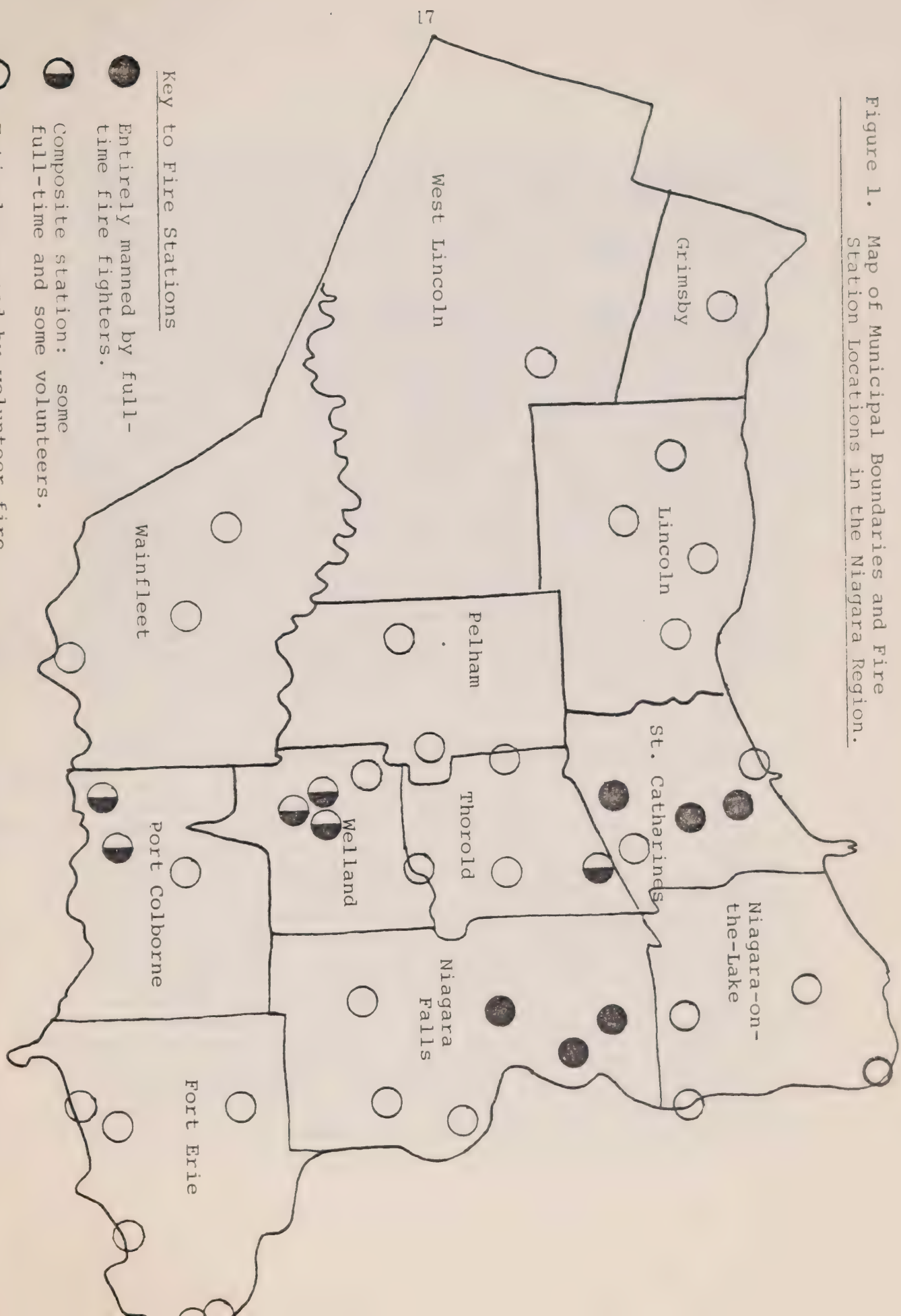
In general, the organizational consolidation of municipal fire departments in 1970 went smoothly. Wainfleet and Grimsby had to make no adjustments whatever: Wainfleet because its boundaries were unchanged, and Grimsby because it had already established a joint fire district with the adjoining township. In St. Catharines, Welland and West Lincoln, the fire departments had to adjust to an expanded area, but no fire departments or stations had to be

TABLE 2. MUNICIPALITIES AND FIRE DEPARTMENTS IN THE NIAGARA REGION, 1975.

Municipality	Population	Equalized Assessment (,000)	Area (in sq. miles)	Building Fires	Fire F.T.	Fighters Vol.	Fire Stations	Fire Trucks	Fire Budget
St. Catharines	120,398	\$1,121,228	38.6	532	115	62	5	13	\$2,278,093
Niagara Falls	67,892	682,421	82.8	423	99	115	6	17	1,634,600
Welland	44,972	445,425	34.3	132	53	146	4	7	1,104,492
Fort Erie	23,072	235,514	68.3	85	1	201	6	14	151,702
Port Colborne	20,340	193,693	49.8	92	13	70	3	7	349,068
Grimsby	15,555	139,526	25.1	44	-	28	1	4	99,070
Thorold	14,694	171,376	35.0	51	7	150	4	9	274,000
Lincoln	14,252	133,877	63.7	46	1	103	4	8	89,260
Niagara-on-the- Lake	12,383	125,950	48.7	46	-	105	4	7	119,284
Pelham	9,834	94,082	44.1	32	-	58	2	6	67,822
West Lincoln	9,338	83,031	145.0	43	-	30	1	4	27,342
Mainfleet	5,933	53,075	83.0	21	-	34	3	4	23,737
REGIONAL TOTAL	358,662	3,479,198	718.4	1547	289	1102	43	93	6,218,470

Source: Fire chiefs or other municipal officers supplied most of the information in the Table.
 Figures for building fires are from the Office of the Fire Marshal, Fire Losses in Ontario
1975 (Toronto, 1976).

Figure 1. Map of Municipal Boundaries and Fire Station Locations in the Niagara Region.



Key to Fire Stations

● Entirely manned by full-time fire fighters.

◐ Composite station: some full-time and some volunteers.

○ Entirely manned by volunteer fire fighters.

Source: Adapted from a map prepared by the Niagara Regional Fire Coordinator.

integrated. In the other seven municipalities, seventeen previously independent fire departments were brought together. This was a particularly delicate matter because most of these departments were volunteer ones, and they prided themselves on their autonomy and local spirit.

Most of these seven municipalities met the problem directly and established a single chain of command. In Niagara Falls and Port Colborne the problem was solved without much difficulty. These cities had full-time fire chiefs and some full-time firefighters, and it was only natural that the volunteer companies of the rural areas would be added to the city department and placed under the command of the city chief. In Pelham, Niagara-on-the-Lake and Lincoln, all the departments to be combined were volunteer ones, but again there were no great difficulties. In Pelham the councils of the amalgamating municipalities requested a report from the Fire Marshal, and they accepted the recommendation of an integrated department. To settle the question of a new chief, they decided on competitive examinations. In Lincoln, the chiefs of the four volunteer stations met prior to amalgamation and jointly recommended that the departments be integrated and that council appoint a full-time chief from among the existing volunteer chiefs. Council accepted these recommendations.

Two municipalities have had difficulty in establishing unified organizations. One is Thorold. In 1970, the old town of Thorold had a full-time fire chief and a composite department with volunteers and enough full time firefighters to have one man on duty around the clock. The rural area (Thorold Township) had three separate volunteer companies. Although the full-time fire chief became chief of the new department, he had difficulty in integrating the operations of the volunteer companies. He wanted to establish a common phone number and dispatching system, as well as a common training program. This was vigorously resisted by the volunteer companies, and the chief was criticized by the local newspaper and the Council. The plans were abandoned. Eventually, two township stations joined the dispatching system of the Town, but one station (Thorold South) is unique in the Region in that it continues to have its own emergency number and handle its own dispatching. All volunteer chiefs are elected, and each company arranges its own training.

Fort Erie has also failed to establish a unified organization. There are now four fire chiefs in Fort Erie: the three stations previously in Bertie Township have remained under the control of one chief, the Crystal Beach station has its own chief, and each of the two stations in the old town of Fort Erie has its own chief. This situation has made Fort Erie the butt of jokes among other fire departments, but it is only fair to recognize that Fort Erie had the most difficult problem of integration in the Region. At amalgamation the three fire departments and six stations (the largest number of any municipality in 1970) were all volunteer ones, but the Bertie department was the largest and it had a full-time chief. It was only natural for Bertie people to feel their chief should head any integrated department. However, this was resisted by others who did not feel the Bertie chief was qualified enough for the job. Local feeling also undoubtedly played a large part, because Fort Erie is probably the most internally divided municipality in the Region. The easiest thing for Council to do in this situation was to forget about integration. In 1973 a report by the Fire Marshal recommended an integrated department and the appointment of a single fire chief, but Fort Erie has not moved towards integration. In fact, when the Bertie fire chief retires at the end of 1976, it appears that he will not be replaced and that each of the six fire stations will have its own chief. The continuation of this situation is difficult to understand.

All twelve municipal fire departments report to council, but the structure of this reporting process varies. The usual pattern (Welland, Port Colborne, Grimsby, Lincoln, Pelham) is to have the department report to the finance committee of council. In St. Catharines, Niagara Falls, Niagara-on-the-Lake and Wainfleet the department reports either directly to council or to a committee involving all members of council. In Thorold the department reports to a fire and light committee, and in West Lincoln to a fire, cemeteries and sanitation committee. Fort Erie has the most unusual structure. Budgets for the different stations are completely separate and the four chiefs report separately to a two-man fire and light sub-committee of the finance committee. No doubt this helps to keep questions about fire organization reasonably far from public view. In addition to reporting to councillors, fire departments also report to the chief administrative officer in those

municipalities which have such a position (St. Catharines, Niagara Falls, Port Colborne, Grimsby, Thorold, and Niagara-on-the-Lake).

So far the new municipal boundaries have resulted in few changes as far as the number and location of fire stations are concerned. Since 1970, only Niagara Falls has made any changes whatever in these areas. In 1971 it organized a new volunteer company and opened a new station in the Crowland area which was added to the City in 1970. In 1975 the City relocated one of its main stations by building a new fire hall on McLeod Road. Otherwise the Region is served by the same fire halls it was served by in 1970. The slow change in this area is due in part to the cost of building new stations and in part to the difficulty of eliminating a fire station once local residents have come to see it as part of their protection.

In West Lincoln, where the one fire station covers an area several times larger than that covered by any other station in the Region, there have been efforts (recommended by the office of the Fire Marshal) to organize new volunteer companies and new stations at Wellandport and Caistor Centre, but thus far these efforts have failed for lack of local interest.

If there have been few changes in the number and location of fire halls, the new municipal boundaries of 1970 did bring some rationalization of fire station jurisdictions (even in Fort Erie). A fire department usually will not respond to a call in a neighbouring municipality, even if it has a station closer to the scene than the neighboring department. Reducing the number of municipalities in 1970 therefore reduced the likelihood that a municipal border would stop the closest fire station from responding to a call. For example, prior to 1970 all of Louth Township was served by a single station at Jordan, despite the fact that many parts of the township were closer to stations in St. Catharines. Now most of the part of Louth which was added to St. Catharines enjoys better fire protection than it did before. Similar adjustments have resulted in other municipalities, and the overall result of the municipal boundary changes of 1970 has been to provide more effective fire protection to some Niagara residents.

This does not mean there are no problems with the jurisdiction of fire stations. Some inter-municipal border problems will be discussed later. Within municipalities there may also be some problems. Ideally, fire departments should allot first-call jurisdictions to their stations on the basis of the time it takes fire companies to get out of the station and travel to a particular point. This would mean assessing response times and travel times in a fairly precise way. This is seldom done. First-call jurisdictions often appear to be drawn simply by "eyeballing" a map. In other cases, especially when volunteers are involved, even political pressure may be used to maintain responsibility for a territory. For example, in St. Catharines, the Walnut Street fire station is the old Merritton volunteer fire department. These volunteers have used political pressure and succeeded in maintaining a territory in which they have first-call responsibilities. City Council and fire department officials have acquiesced in the demand of the Merritton company, even though they know these volunteers cannot respond to many calls within their jurisdiction as quickly as can full-time firemen located at other stations. A similar situation exists in Thorold, where the Thorold South volunteer station continues to have first-call responsibilities in an area which the Highway 58 tunnel puts within easier reach of the town station.

B. Fire Prevention Services

As one area fire chief commented, "prevention is the name of the game." Fire prevention involves such things as building codes, the approval of building plans, the inspection of buildings, alarm tests and safety lectures. The idea is to prevent fires from starting and to minimize the danger of those that do break out. If a major disaster is to be prevented, standards, inspections and safety programs are essential for schools, hospitals and other major commercial and industrial establishments. Although statistical data are scarce, fire authorities recognize that a significant proportion of fire losses can be avoided in a municipality if there is an adequate prevention unit functioning within the local fire department.

In terms of staff, the fire prevention capacity of fire departments in the Region vary considerably. As Table 3 shows, only St. Catharines and Niagara Falls have multi-member fire prevention units within their departments.

TABLE 3. FIRE PREVENTION SERVICES OF FIRE DEPARTMENTS
IN THE NIAGARA REGION

Municipality	Full Time Chief	Fire Preven- tion Officers		Residential Inspection Program	Residences Inspected in 1975 (approx) ^b
		F.T.	P.T.		
St. Catharines	Yes	5	-	Yes	2868
Niagara Falls	Yes	5	-	Yes	800
Welland	Yes	1	-	No	..
Fort Erie	No	1 ^a	-	No	..
Port Colborne	Yes	-	-	Yes	950
Grimsby	Yes ^a	-	-	Yes	300
Thorold	Yes	1	-	Yes	400
Lincoln	Yes	-	-	No	..
Niagara-on-the-Lake	No	-	1	No	..
Pelham	No	-	1	Yes	226
West Lincoln	No	-	-	No	..
Wainfleet	No	-	-	No	..

a. First appointed only in 1976.

b. Even Departments without residential inspection programs do a few home inspections each year, usually on request. The notation ".." has been used in these cases.

Welland and Thorold have a single full-time fire prevention office and Fort Erie has just appointed one, partly as a result of an earlier report by the Fire Marshal. Port Colborne, Lincoln and now Grimsby can draw on full-time fire chiefs for fire prevention work. Niagara-on-the-Lake and Pelham have no full-time firemen at all, but they have both appointed part-time fire prevention officers to assist the part-time chiefs. Only West Lincoln and Wainfleet have no specialized fire prevention staff. Another factor to consider is staff qualifications. Fire prevention work lacks the glamor of firefighting, but it is a more technical field and requires special training if it is to be done properly. This is especially true with regard to the larger, modern buildings, with their variety of construction materials and engineering features. One person familiar with the Regional scene said that he knew that many municipalities simply did not have men qualified enough to do plan approvals and inspections for such structures as motels and apartment buildings.

The importance of having some full-time and trained fire prevention staff is well illustrated by the recent appointment of a full-time chief (the former volunteer chief) in Grimsby. According to a newspaper story:

During his first three weeks as full-time chief he has found he was able to do many things he couldn't do before because of lack of time. This includes home inspections for fire prevention, carried out with the aid of members of the department.

At the moment he is busy conducting fire safety inspections of small industries in the town and making diagrams to aid firefighters in case of emergency. In the fall Chief Pielt will begin inspecting schools for any fire hazard. (The St. Catharines Standard, July 27, 1976.)

One can only wonder how Grimsby got along without these services in the past.

Fire prevention programs also vary considerably among municipalities. Most fire departments do inspections of institutions and major commercial and industrial buildings according to local by-laws, but such inspections are not

always done on a regular basis. West Lincoln indicated it had no mandatory inspections of any kind. Residential (homes, apartments) inspections are not given high priority by any department. These inspections are usually done by regular firefighters, but half the Region's fire departments have nothing resembling a regular program. The programs of those departments which do have them are usually not systematic. For example, St. Catharines does routine residential inspections only in those areas covered by stations with full-time firefighters. The number of residences inspected in 1975 is about 10% of the city's total number of residences. Some of the volunteer departments (Grimsby, Thorold, Pelham) achieve similar coverage. Port Colborne does somewhat better. It uses two-man teams of volunteers and pays them on the basis of the number of inspections. Apparently the incentive works quite well.

The levels of fire prevention services do not follow any precise patterns, but it is quite clear that in most municipalities fire prevention is not "the name of the game." This raises questions about the quality of local fire services. One suggestion that has been made in the past is that fire prevention work should be centralized on a Regional basis. This would ensure that a qualified staff was available to all areas and that safety standards would not vary from one municipality to another.

C. Full-Time and Volunteer Firefighters

In firefighting the important thing is to get trained men, water and equipment to the scene of a blaze as quickly as possible. A great number of factors must be considered in determining just how this can best be arranged, but in the Niagara Region the most common focus of discussion is the relative merits of full-time and volunteer firefighters. The discussion is guaranteed to be a heated one, usually because the issue is over-simplified. Some people give the impression that the volunteer is an anachronism in a rapidly changing world where anything but the highest professional standards are an unacceptable risk to life and property. Others give the impression that the volunteer is one of our last links with a noble tradition of self-help and community spirit and that he is endangered by those who have no concern for tax dollars or the cultivation of men's nobler instincts.

Perhaps the most common misconception in the issue of full-time and volunteer firefighters is that greater centralization in fire protection will spell the end of the volunteer. The evidence does not suggest this at all. The consolidation of municipalities in 1970 produced larger, more centralized departments, but this has had little impact on the relative importance of volunteers. All fire departments in the Region still use volunteers. Table 4 compares the situation now with a decade ago when the Mayo Commission investigated this issue. Although full-time firemen have increased more rapidly than volunteers in the intervening years (42% vs 10%), the number of volunteers has still increased. There has also been no increase in the number of stations using full-time firemen. Before 1970 only twelve stations in five municipalities employed full-time firefighters and the situation is exactly the same today. On the other side of the ledger, Niagara Falls, with its many full-time firefighters, has actually organized and trained a new volunteer company since taking over responsibilities for a large rural area in 1970.

It is quite clear, therefore, from the history of the Region, that volunteers can continue to exist alongside full-time firemen. This can be done in different ways. Perhaps the best way is to form composite stations, where a few full-time men are available to handle small fires and to get equipment to the scene of a fire quickly. Volunteers then are an auxiliary force to provide extra manpower when needed. Welland, Port Colborne and Thorold all use this arrangement. Welland and Port Colborne cover the whole of their municipalities in this way, and they are the only municipalities in the Region where all residents can be assured of having some full-time firemen respond to their call. St. Catharines and Niagara Falls have segregated their full-time and volunteer firefighters, with stations being entirely composed of one or the other. In Niagara Falls this makes some sense because the volunteer companies are only responsible for the large rural areas. The situation in St. Catharines makes less sense, but it does show that volunteers are not necessarily endangered in a more centralized context. In St. Catharines, the present arrangements are a legacy of the amalgamation of Port Dalhousie, Grantham, Merritton and St. Catharines in 1961. The Port Dalhousie and Merritton volunteers continue to have first-call responsibilities in their areas.

TABLE 4. A COMPARISON OF FIRE DEPARTMENT STAFFS,
1964 AND 1975

Municipality	Firemen 1964		Firemen 1975		Fire Halls 1975		
	F.T.	Vol.	F.T.	Vol.	F.T.	Comp.	Vol.
St. Catharines	97	60	115	62	3	-	2
Niagara Falls	56	166	99	115	3	-	3
Welland	35	102	53	146	-	3	1
Fort Erie	1	138	1	201	-	-	6
Port Colborne	10	81	13	70	-	2	1
Grimsby	-	22	-	28	-	-	1
Thorold	5	128	7	150	-	1	3
Lincoln	-	83	1	103	-	-	4
Niagara-on-the-Lake	-	100	-	105	-	-	4
Pelham	-	60	-	58	-	-	2
West Lincoln	-	26	-	30	-	-	1
Wainfleet	-	33	-	34	-	-	3
REGIONAL TOTALS	204	999	289	1102	6	6	31

Source: The 1964 figures are calculated with minor modifications from the Niagara Region Local Government Review Commission, Data Book of Basic Information (Toronto, 1964), p. 37. Current boundaries have been used.

Note: Although Welland is shown as having three composite stations and one volunteer station, the volunteer station acts primarily in an auxiliary capacity. Welland has only three distinct fire districts, and each has some full-time and some volunteer fire-fighters attached to it. Port Colborne has a somewhat similar arrangement.

Efforts have been made to restrict these stations to an auxillary function, but this has been successfully resisted by the volunteer companies.

Whether or not a Regional fire department is created, volunteer fire companies will continue to play an important role. The main reason is economic. It costs about \$80,000 per year to keep one full-time firefighter on duty around the clock, whereas most volunteers serve for only a few hundred dollars per year. This means that Pelham can run two volunteer companies and Lincoln can run several for less than it costs to have one full-time firefighter available. In sparsely populated areas, therefore, a number of volunteer companies can usually provide better protection than a single full-time company. Even if it takes a volunteer company longer to get out of the station, relatively shorter travelling time may still allow it to respond to a call more quickly than a full-time company located at some central point.

Another reason volunteer fire companies will continue for some time is they have become important social organizations in small communities, and some communities may want to maintain them even if they do not do the job as effectively as full-time men would. On the positive side, these volunteer companies often take a leading role in community projects and contribute to community life in many ways other than firefighting. On the negative side, these companies can become private social clubs which resent the introduction of full-time firemen because it will threaten their liquor licenses and their prestige in the community. When it comes to defending their interests, volunteers have the numbers to impress municipal politicians.

For the future, perhaps the most important point for citizens and municipal councils to be aware of is that the conditions which permitted effective volunteer fire companies are changing in many ways. It is not larger municipal boundaries which are the cause of concern, but general changes in society. One such change is increased mobility and perhaps a decline in local identity. As one former chief said:

The volunteer of today is not the volunteer of yesterday, the blacksmith who worked on the main street and lived above his shop. Today the volunteer has a car, a cottage, a boat, money to travel, and when the weekend comes he is gone.

Also, as conditions change, more and more volunteers work outside their community and therefore are unavailable for duty. For example, the fire chief for Niagara-on-the-Lake works in Hamilton. Another problem is that as the cohesion of local communities lessens, employers are reluctant to let volunteers off work to respond to calls. In Fort Erie, even a local alderman refuses to let an employee in his firm leave work to answer calls from the nearby station. The result is that the turnout of volunteers can be uneven. At night most of the volunteers in a company will respond, with the result, according to one chief, that "men are tripping over one another". During the day, when many men are at work, and especially between 3:00 and 5:00 p.m. when shifts are changing, there may not be enough men to handle the equipment.

The training of volunteer firemen is also becoming the victim of changing social and economic conditions. The types of materials used in construction and the design of buildings are subject to change and require constant study. The increasing amount of industrial activity in the more rural areas and the corresponding hazards of costly industrial fires or spills of industrial chemicals place new responsibilities on volunteer departments. Advances in firefighting techniques need to be implemented, and response times and techniques need to be improved. However, it is becoming more difficult to operate the weekly training sessions as the volunteers live according to different work schedules and respond to other interests in the expanded community. Although seminars and training sessions are organized within the region, the time and costs involved prohibit regular attendance by many volunteers. The chief of one volunteer department, for example, knew of a training seminar being held during the day under the auspices of the Fire Marshal, but was not going to send any volunteers because they would miss work and the municipality would not reimburse them. Another chief reported that his volunteer companies were troubled by high turnover. Men joined for the social aspect and dropped out when they were asked to devote very much time to training.

Even the volunteer company's role in general community affairs changes with changing conditions. As training sessions and the number of calls increases, it is only natural

to expect that the volunteer will be unwilling to give extra hours to other projects as well. When asked about the role of a volunteer company in community affairs, one chief candidly admitted that his men did little community work now. He emphasized training and he had produced a good department, but at a cost. Where the volunteers might previously have taken the lead in the community's efforts to build an arena, his men were now reluctant to give up their Saturdays even to assist in construction.

D. Expenditures, Losses, and Total Fire Costs

One way to assess and compare fire departments is to examine the money spent on fire protection and the estimated value of property destroyed by fires. As already noted, such figures provide only a rough indication of the effectiveness of fire protection, but they are widely used in studies of fire protection and they do provide a dramatic way of highlighting differences among municipalities. Two standardized calculations are commonly used: dollars per capita and dollars per \$1,000 of equalized assessment. Per capita figures are the most common, but they do not take into account the fact that the value of property (especially in commercial and industrial classifications) may vary among municipalities. Expenditures and losses calculated on the basis of equalized assessment are therefore more relevant. Often the two sets of calculations will show the same general picture.

Table 5 indicates that municipalities in the Niagara Region vary considerably in terms of their expenditures on fire protection. As one would expect, expenditures are related to the use of full-time firefighters. Cities employing full-time firemen (St. Catharines, Niagara Falls, Welland, Port Colborne and Thorold) have expenditures several times higher than those municipalities relying exclusively on volunteers. Table 5 also documents some interesting changes in expenditures between 1970 and 1975. Welland has emerged as the top spender among Niagara municipalities, moving up from third position in 1970. Niagara Falls has maintained its position near the top, while St. Catharines has declined in comparison to the other large cities. Among the smaller municipalities, Grimsby, Niagara-on-the-Lake and Pelham have shown the largest increases in expenditures. On the other hand, Wainfleet, West Lincoln and Fort Erie

TABLE 5. FIRE PROTECTION EXPENDITURES IN THE NIAGARA REGION, 1970-1975

Municipality	Expenditures per capita			Expenditures per \$1,000 of Equalized Assessment		
	1970	1975	% Change	1970	1975	% Change
St. Catharines	\$12.86	\$18.92	47%	\$1.61	\$2.03	26%
Niagara Falls	16.03	24.08	50	1.69	2.40	42
Welland	12.28	24.56	100	1.53	2.48	62
Fort Erie	5.53	6.58	19	.65	.64	- 2
Port Colborne	9.07	17.16	89	1.20	1.80	50
Grimsby	2.85	6.37	124	.40	.71	78
Thorold	12.31	18.65	52	1.24	1.60	29
Lincoln	4.03	6.26	55	.50	.67	34
Niagara-on-the-Lake	5.10	9.63	89	.58	.95	64
Pelham	3.27	6.90	111	.46	.72	57
West Lincoln	3.10	2.93	- 5	.42	.33	-21
Wainfleet	4.78	4.00	- 16	.65	.45	-31
REGIONAL AVERAGE	10.89	17.34	59	1.31	1.79	37

Sources: Data on 1970 expenditures are from Ontario, Department of Municipal Affairs, 1970 Summary of Financial Reports of Municipalities (Toronto, 1972), vol. i, p. 11. Data on 1975 expenditures are from reports of fire chiefs and other municipal officers. Calculations are based on population and assessment figures provided by the Regional Municipality of Niagara.

have shown the smallest increases. In fact, their expenditures have actually declined in relation to their assessment.

Table 6 considers fire losses. This is the other side of the ledger, because fire expenditures are designed to reduce fire losses. One problem with fire loss figures is that they are particularly susceptible to wide variations from year to year depending on the occurrence of major fires. For this reason it is usual to average fire losses over a five year period. As Table 6 reveals, Welland and St. Catharines have the lowest losses, West Lincoln and Wainfleet have the highest. With the exception of Niagara Falls, the cities employing full-time firemen have lower losses than those municipalities relying exclusively on volunteers. For some reason, perhaps the large number of transients, Niagara Falls has the highest incidence of fires in the Region, and in recent years, it has had several large fires. Table 6 also shows some interesting changes in fire losses over the last few years. Calculated on an assessment basis, losses have actually decreased in several municipalities, most notably Pelham and St. Catharines. There have also been some dramatic increases in losses.

In general, as a comparison of Tables 5 and 6 would show, there is an inverse relationship between expenditures on fire protection and fire losses: the more a municipality spends, the lower its losses. This is as it should be, but it raises the question of overall effectiveness and the type of strategy a municipality should follow. Table 7 attempts to bring this discussion of departmental effectiveness to some sort of conclusion by examining what can be called total real fire costs. If insurance were not a factor, municipalities would operate most effectively if they minimized total real fire costs, the combined costs of expenditures on fire protection and fire losses incurred because of less than perfect protection. The lower the total real fire costs, the more effective is the municipality's fire protection program. Comparisons of total real fire costs cannot take into account the factors which affect the difficulty of the tasks faced by the different departments, but they are more helpful than comparisons of expenditures and losses in isolation of one another.

TABLE 6. FIRE LOSSES IN THE NIAGARA REGION, 1969-73 to 1971-75

Municipality	Average losses per capita			Average losses per \$1,000 of Equalized Assessment		
	1969-73	1971-75	% Change	1969-73	1971-75	% Change
St. Catharines	\$ 6.88	\$ 7.47	9	\$.83	\$.84	1
Niagara Falls	11.15	17.01	53	1.16	1.73	49
Welland	4.78	6.83	43	.56	.73	30
Fort Erie	16.18	26.00	61	1.84	2.65	44
Port Colborne	6.02	11.63	93	.78	1.32	69
Grimsby	17.55	20.47	17	2.44	2.42	- 1
Thorold	8.20	13.95	70	.79	1.30	65
Lincoln	21.43	21.98	3	2.57	2.50	- 3
Niagara-on-the-Lake	8.11	14.53	79	.90	1.50	67
Pelham	14.95	14.49	- 3	2.01	1.64	-18
West Lincoln	35.78	47.02	31	5.01	5.75	15
Wainfleet	22.45	29.79	33	3.12	3.57	14
REGIONAL AVERAGE	10.37	13.93	34	1.21	1.51	25

Sources: Data on fire losses are taken from Ontario, Ministry of the Solicitor General, Office of the Fire Marshal, Fire Losses in Ontario 1973 (Toronto, 1974), and Fire Losses in Ontario 1975 (Toronto, 1976). Calculations are based on population and assessment figures for the mid-point years of 1971 and 1973. For example: average fire losses 1969-73 divided by population 1971.

In Table 7, average total real fire costs have been calculated for the most recent five-year period. This Table shows that total real fire costs vary much less among municipalities than either protection costs or fire losses. More importantly, it shows that very different types of fire departments operating in very different contexts can achieve similar levels of effectiveness in terms of total fire costs. An entirely volunteer department, such as the one in Pelham, can hold its own against departments with full-time firemen and more sophisticated equipment. Perhaps the success of the Pelham department is due to its emphasis on training and fire prevention work.

Not all the variation among municipalities in total real fire costs should be attributed to the effectiveness of the fire departments. The physical size of the municipality is also an important factor. The five municipalities with above average total costs on an assessment basis are the municipalities with the largest geographic areas. Overall, the relationship between the area of a municipality and its total fire costs is a reasonably strong one. There are exceptions to the pattern, of course. Grimsby is the smallest municipality in area, but it has moderate total costs; Niagara-on-the-Lake and Pelham rank seventh and eighth in area, but last in total costs. These cases suggest that the size of a municipality should not simply be used as an excuse for high total costs. At the same time, however, one must recognize that, even with improvements, municipalities with large areas are likely to bear higher than average total fire costs.

TABLE 7. RANKING OF FIRE DEPARTMENTS IN THE NIAGARA REGION BY AVERAGE
TOTAL FIRE COSTS, 1971-1975.

Municipalities Ranked by Total Fire Costs per capita		Municipalities Ranked by Total Fire Costs per \$1000 of Equalized Assessment	
(1)	West Lincoln	(1)	West Lincoln
(2)	Niagara Falls	(2)	Niagara Falls
(3)	Wainfleet	(3)	Wainfleet
(4)	Fort Erie	(4)	Fort Erie
(5)	Thorold	(5)	Lincoln
Regional Average		Regional Average	
(6)	Lincoln	(6)	Grimsby
(7)	Grimsby	(7)	Port Colborne
(8)	Welland	(8)	St. Catharines
(9)	Port Colborne	(9)	Thorold
(10)	St. Catharines	(10)	Welland
(11)	Niagara-on-the-Lake	(11)	Niagara-on-the-Lake
(12)	Pelham	(12)	Pelham

Sources: Average Total Real Fire Costs are the sum of (1) the average fire losses for 1971-1975 and (2) the average of departmental costs for 1972 and 1974. The source for 1972 departmental costs is the 1973 Handbook (see Table 1); for 1974 the source is the audited financial statement of individual municipalities. Otherwise, sources are those cited in Tables 5 and 6.

CHAPTER III

PATTERNS OF COOPERATION

From a regional perspective it is not so much the individual fire departments which are of interest but the system of cooperation among departments. Although the Regional Municipality of Niagara Act provides only for a Regional Fire Coordinator and an "emergency fire service plan and program," it is possible that informal cooperation could go well beyond this to cover some of the areas in which the Mayo Commission felt cooperation would be in the interests of the whole Region. Unfortunately, this is not the case. As the following discussion of mutual aid, intermunicipal agreements and other areas indicates, cooperation today scarcely goes beyond what existed prior to 1970.

A. Mutual Aid and the "Emergency Plan"

In the Niagara Region all fire departments (except Wainfleet) participate in a system of Mutual Aid. The mutual aid system itself is not a new idea. It was introduced in the 1950's at the initiative of the Provincial Government and the Fire Marshal. Prior to regionalization there were separate mutual aid schemes for Lincoln and Welland counties. All that has happened since 1970 is that the two county systems have been merged. To implement the present system each municipality (except Wainfleet) has passed a standard by-law under which its fire department is:

authorized to leave the limits of the municipality or fire area, at the discretion of the Chief and under the direction of the Niagara Regional Fire Coordinator, to respond to calls for assistance from other municipal fire departments authorized to participate in the Niagara Regional Mutual Fire Aid System or any other Regional or County Mutual Fire Aid System on a reciprocal basis.

There are no charges for assistance provided under Mutual Aid. In time this might be the cause of tension if some departments continually provide more assistance than they

receive, but there is no immediate problem. In 1975 Mutual Aid was invoked only once, when St. Catharines assisted Thorold in a school fire. Recently both Fort Erie and Welland assisted Port Colborne in a large flour mill fire.

The "emergency plan and program" referred to in the Regional Municipality of Niagara Act is at present no more than a listing of sources of assistance under Mutual Aid. For each department there is a listing of the other departments from which it can request and expect certain types of assistance in an emergency. For example, Pelham is instructed to direct its first request for an aerial truck to Welland. The "plan" contains no other provisions for cooperation and there are no provisions for an area-wide command of forces. The local officer is always in command no matter who else has been brought in to assist him. Although all chiefs are aware of where to call for assistance under Mutual Aid, it is not clear that they know what is meant by the "emergency plan and program" for the Region. One chief was critical of the Regional Fire Coordinator because the chief thought that such a plan had not been prepared. When another chief was asked about the "emergency plan", he said he was not sure whether he had seen a copy or not. Since what passes for the "emergency plan and program" is not very different from what existed in the old county plans, and since the copy of the Niagara Region's plan is located in St. Catharines and contained in an old looseleaf binder with "Lincoln County" still on the cover, the confusion of fire chiefs on this point is perhaps understandable.

It is important to note that Mutual Aid is not "automatic aid", a term used for systems of cooperation in which a number of departments function as one department in emergency situations under centralized communications and dispatching. The difference is significant. Under Mutual Aid, for example, a local department in the Niagara Region must respond to a fire, and then the local chief must assess the need for assistance and request it from neighboring chiefs and the Regional Coordinator. The amount of aid sent is at the discretion of the neighboring chief and is dependent on his concerns about leaving his own municipality unprotected. Under a system of automatic aid, a central dispatcher would automatically dispatch extra

equipment from adjoining municipalities and arrange back-up protection as soon as a serious or potentially major fire was reported. The advantage of automatic aid systems is recognized by the insurance industry with lower rates than those applied to mutual aid systems.

It is also important to note that Mutual Aid and the "emergency plan" are intended only for major fires where a municipality has already committed all its resources, or for situations which require special equipment, and they are not intended to help a municipality cope with "normal" situations. This means that Mutual Aid cannot be used to have a neighboring department handle a "border call". In fact, Mutual Aid is not intended to handle a first call of any sort. For example, if a small department has committed most of its equipment at one fire and a second fire breaks out elsewhere in the municipality, the department is still responsible for the initial response to the second call. In a small municipality two fires at the same time may be unusual, but according to fire authorities it is something that can normally be expected. The rationale for restricting Mutual Aid to major fires and emergencies is simple: if municipalities could anticipate assistance from other municipalities in handling "normal" responsibilities, they would have no incentive to improve or maintain their own firefighting capacity and the burden of fire protection would be unfairly shifted to others.

B. Border Calls and Inter-municipal Agreements

Since fire departments will not normally respond to calls beyond their municipal boundaries, the present system of municipal boundaries in the Niagara region inevitably means that some Niagara residents are not served by the closest fire station or the station with potentially the fastest response. (The map of fire station locations and municipal boundaries on p. 17 is insufficiently detailed to identify all the border areas which are not served by the closest station, but it suggests some areas.) These border "problems" can be solved in several ways. One way would be to redraw municipal boundaries on the basis of fire station locations. Another way would be to create a regional fire department and eliminate the effect of municipal boundaries altogether. Of course, both these approaches are simplistic. The normal, least drastic and

most adaptable solution to border problems is the inter-municipal agreement. One municipality agrees to protect part of another municipality in exchange for similar protection elsewhere or for payment.

If the existence of intermunicipal fire protection agreements is any indication of the ability of area municipalities to cooperate in the public interest, the Niagara record is not a good one. At present the only example of cooperation is between Pelham and Thorold, whereby a Thorold station covers the St. John's area of Pelham and a Pelham station covers an area of southern Thorold. This arrangement continues a pattern of cooperation that existed prior to 1970.

The failure to reach a suitable intermunicipal agreement and the consequences of this failure are well illustrated by the case of the eastern Gainsborough area of West Lincoln. Prior to 1970 the Pelham Township (Fenwick) fire department provided protection to the neighboring (up to Wellandport) area of Gainsborough Township. Gainsborough had no fire department of its own and it paid nothing for Pelham's protection. (At the time of the Mayo Commission, Gainsborough was the only municipality in the Niagara region that spent absolutely nothing for fire protection.) In 1970 all of Gainsborough became part of West Lincoln and the West Lincoln fire station in Smithville became responsible for protecting the Gainsborough area. Since Smithville was much farther away than Fenwick, the residents of the eastern Gainsborough area were anxious to continue to receive protection from the Fenwick station of the Pelham fire department. Initially, this was done for a small fee. Then Pelham wanted to increase the fee. Needless to say, West Lincoln felt the proposed increase was excessive. Negotiations between the two municipalities proved fruitless, and the Pelham department no longer responds to calls from the Gainsborough area. As insurance agents have found out about the change, they have rewritten policies and Gainsborough residents have been faced with increased insurance rates.

In other areas, the possibilities of border agreements have not even been seriously discussed. Several chiefs gave the impression that they had never even given the matter any thought and that it had never emerged as a local issue. They admitted there were border areas in

which agreements might be advantageous, but they made it clear that they were not about to stir up interest in the subject.

There seem to be two problems with reaching intermunicipal agreements under present circumstances. One is that no fire official (including the Fire Marshal) has the responsibility for promoting the advantages of intermunicipal agreements. Local chiefs are content to leave things as they are, and members of the public are probably unaware of the possibility of such agreements. A second problem is the absence of guidelines or a mechanism by which to settle disagreements about compensation. Inevitably, municipalities are going to differ about the value of fire protection being bought and sold, but at present no one (including the Regional Fire Coordinator or the Ontario Fire Marshal) takes an interest in settling disputes, and the Ontario Municipal Board is not in a position to adjudicate.

C. Dispatching and Communications

Intermunicipal cooperation with regard to dispatching and communications has made no real advances since 1970. Two different radio frequencies are still in use -- one for the old Welland County area and one for the old Lincoln County area. Until 1975 there was absolutely no link between the two areas, but the St. Catharines control room now has the equipment to monitor the Welland County frequency. Still, there can be no inter-station or inter-truck communications by radio across the old county line. This means, for example, that the Thorold department knows what is happening in Fort Erie but not what is happening in St. Catharines. Apparently there are no great technical obstacles to converting to a common frequency, but no one has seriously pursued the advantages and disadvantages of such a change.

In receiving fire calls and dispatching trucks, the only example of intermunicipal cooperation centres on St. Catharines and antedates regionalization. Under this arrangement each fire station in Niagara-on-the-Lake (4), Lincoln (4) and Grimsby(1) has its own emergency number, but the call is answered in the St. Catharines control

room where there is a full-time fireman on duty around the clock. The St. Catharines control room then sounds the siren at the local station and radios appropriate instructions. Although this saves these municipalities from operating their own answering services, they do not pay anything to St. Catharines.

In their briefs to the present Review Commission, St. Catharines and Wainfleet write of the need to investigate the feasibility of a more centralized system of communications and dispatching. Apart from the question of a common radio frequency, there are two different possibilities which have already received some consideration. One is the greater centralization of dispatching by the addition of tie-ins to the St. Catharines control room. The other is the introduction of a general 9-1-1 emergency telephone number. Although these two possible changes are logically distinct, there are connections between them.

The expansion of the current arrangement whereby the St. Catharines control room answers calls and dispatches trucks for neighboring municipalities appears to make good sense. Now that St. Catharines has the radio equipment to handle the Welland County frequency, this expansion would be a relatively simple and inexpensive matter to arrange. Pelham has already expressed interest in joining, and Thorold would be another logical participant. If all municipalities were to join, this call and dispatch system would resemble that currently in use by the Regional Police. Unlike the police system, however, this fire system should probably be restricted to emergency calls. Local fire departments would each have a separate number and its own answering service for routine phone calls.

Of course, further centralization of communications need not be total and it need not be centered in St. Catharines. The St. Catharines control room could easily be moved to another location if that was seen as more desirable. Another possibility would be several communication centres - perhaps one in Niagara Falls to include Fort Erie and another in Welland to include Port Colborne, Wainfleet and Pelham. Fort Erie has informally approached both Niagara Falls and St. Catharines about using their dispatchers.

Apart from emergency situations and the development of "automatic aid", the advantage to greater centralization in communications is the replacement of several "weak" systems of dispatching. Fort Erie currently uses a regular answering service, but the operators are untrained and sometimes do not know which fire station to alert. Pelham relies on a security service, while Wainfleet, West Lincoln and part of Thorold rely on housewives. (In general, unless other changes are made, a centralized dispatching system based in St. Catharines would probably not increase the quality of dispatching presently available in Niagara Falls, Welland or Port Colborne.) The main disadvantage to a centralized system of dispatching is the potential loss of valuable local knowledge. Some people fear that a dispatcher in St. Catharines may not be familiar enough with local geography and names in a distant municipality to alert the correct station. Though not without foundation, this fear can be overstated. Local knowledge is indispensable in finding certain rural addresses and in reaching certain locations by the most efficient route. With an adequate street index, however, detailed local knowledge is probably not very important in making the decision as to which station to alert. Mistakes would at most be of a minor nature, and even the present dispatching system produces these.

A centralized system might also save some money. One man could easily handle the volume of emergency fire calls generated throughout the Region, but at present both St. Catharines and Niagara Falls have a regular fireman on duty around the clock to answer calls and dispatch trucks. Both of these men also answer all routine calls to the fire department and re-route them to the proper person. This helps keep the dispatchers occupied, but one suspects that these routine calls (mostly daytime) could easily be handled more cheaply in other ways. Even if St. Catharines and Niagara Falls each had to hire a receptionist for routine, daytime calls, the savings in freeing one full-time fireman for regular duty would be considerable.

Another change which would affect fire communications in the Region would be the introduction of a 9-1-1 emergency number and central emergency bureau. Telephone companies throughout North America have reserved the number 9-1-1 for emergency calls. The idea is simple: anywhere in a

given area, dialing 9-1-1 puts a person in contact with a central emergency switchboard responsible for police, fire, ambulance and other emergency services. The central switchboard either dispatches the assistance or routes the call directly to the appropriate dispatcher. The main advantages are the short, easy-to-remember number and the elimination of the need to dial separate authorities in an emergency requiring several services. Other advantages include such things as free calling from phone booths, and an ability to trace calls no matter how short their duration. Already Canadian communities such as Vancouver, Calgary, Edmonton, St. John's and London have converted to a 9-1-1 system. In this area, the Waterloo Region has introduced the system, and the Hamilton-Wentworth Region has recently decided to do so as well. It seems that it is only a matter of time before all of North America follows.

In the Niagara Region, the 9-1-1 system has been considered. Bell Canada is prepared to implement the system (it requires lead time of at least two years), but the company does not promote or "sell" the service. The only Bell requirement is that the service involve at least ambulance, fire and police services and that the Regional Municipality assume responsibility and pay the bills. Thus far, the Police Board has recommended adopting the 9-1-1 system and the Regional Fire Coordinator has reported to the Regional Finance Committee on the feasibility of the system. There the matter rests. The Regional Chairman and the Finance Committee have decided not to proceed at present because of the costs involved. The cost is on the order of \$150,000 per year - roughly 50¢ per capita.

While the main obstacle to 9-1-1 appears to be cost, it is also fair to say that some fire departments generally are not very enthusiastic about the system for other reasons. Part of the problem may be a failure to appreciate how the system operates. A common misconception is that there could be unusual problems in identifying the proper address of a call because there are many streets in the Region with the same names. In fact, this is not at all likely. All incoming calls on the 9-1-1 switchboard can be automatically identified in terms of the telephone exchange in which they originate.

Some fire departments are hesitant about 9-1-1 because it has maximum advantage in conjunction with centralized

dispatching. The 9-1-1 switchboard could be linked with the present decentralized system, but it might take extra seconds to route the call to the appropriate local dispatcher. Telephone exchange boundaries do not usually coincide with municipal boundaries. This means the central 9-1-1 switchboard operator must usually identify the precise address of the call before it can be routed (via a hot line) to the local dispatcher who must again inquire about the address before dispatching equipment. As some fire chiefs point out, the duplication could negate the supposed speed and convenience of 9-1-1. This is probably true, if one assumes (as most fire chiefs seem to do) that almost everyone knows or remembers the local fire number in an emergency. Many of the delays in referral could be eliminated by reducing the number of dispatching centres or realigning their jurisdiction. Having one central fire dispatcher working in conjunction with the 9-1-1 switchboard would eliminate all problems. The logic of the situation therefore leads those who question the wisdom of centralized dispatching also to question 9-1-1.

Some firemen are also reluctant about a 9-1-1 system because it would be managed by the police. The usual practice in 9-1-1 systems is to have the police control the central switchboard and communications room, even though they do not directly handle fire dispatching. This makes sense for a number of reasons. The police have the most sophisticated communications system, they get the most emergency calls, and they are involved in most emergency situations, including fires. In the Niagara Region in 1975, for example, the police dispatched emergency assistance about 98,000 times, the ambulance service about 11,000 times, and the fire departments about 5,500 times. The Niagara Regional Police also have a very sophisticated communications centre manned by trained operators and dispatchers. The problem is that firemen do not trust policemen even when the police are not directly responsible for dispatching fire equipment. The apprehensions of firemen are seldom spelled out clearly, but many fire chiefs will admit that they are there. At the general level there is concern that the status of firemen will be downgraded. The most specific accusation is usually that the police would give preference to police dispatching and send a cruiser to an emergency before they would send a

fire truck. This fear is probably unfounded. For example, at present, when the police switchboard is first to receive notice of a fire call in the St. Catharines-Lincoln area, a police dispatcher talks via a hot-line to the St. Catharines fire dispatcher at the same time he calls a police cruiser on the radio. One message serves both simultaneously. Quite likely, much of the firemen's apprehension about the police and centralized communications in general could be dispelled by an inspection of the police communications room.

D. Training

Special programs conducted by the Fire Marshal's office and by firemen's associations provide some common training of firemen in the Region, but fire departments are responsible for their own training programs and there is little cooperation among them. St. Catharines and Niagara Falls are the only departments with special training facilities, but other departments make little use of them. This may be partly a result of a failure to communicate effectively. The St. Catharines fire chief is quite willing to share his facilities with others but he reports that he has never been asked about the possibility. A chief of a volunteer department indicated he was wholeheartedly in favor of centralized training and said it would be nice to have access to the St. Catharines facilities. Another problem with cooperation in training, however, is that it is difficult to get volunteers to attend training sessions, and chiefs with volunteer departments have not taken much initiative in seeking to use more sophisticated training facilities.

E. Firemen's Associations

The persistence of old loyalties and the difficulties of establishing regional patterns of cooperation are well illustrated by the existence of two firemen's associations. Prior to 1970 there were three associations. In each county there was a Mutual Aid Association which had been initiated by the Fire Marshal's office in the 1950's in order to provide the informal contacts and instructional programs that would make the Mutual Aid system work more effectively. The Lincoln Association worked reasonably well, but the Welland County Association managed to get

good participation only on special occasions. The problem in Welland County was competition from the Niagara District Fire Fighters Association. This was exclusively an association of volunteers started in the 1920's which ran educational programs, pressured councils and otherwise defended the interests of volunteer firemen. At times it had members from Lincoln County and from outside the Niagara Region, but it was primarily a Welland County organization.

Now there are two associations, the Niagara Regional Mutual Aid Association and the Niagara District Fire Fighters Association, and old differences persist. Most of the active members of the Mutual Aid Association are from the old Lincoln County area, while the Niagara District Fire Fighters Association is an association of volunteers primarily from the old Welland County area. There is some competition between the two associations which helps perpetuate the old county loyalties and the tensions between volunteers and full-time firemen.

CHAPTER IV

THE REGIONAL FIRE COORDINATOR

The one person with some responsibility for fire protection in the Niagara Region as a whole is the Regional Fire Coordinator. Under the RMN Act he is responsible for "the establishment of an emergency fire service plan and program for the Regional Area." He is appointed by the Regional Council and he reports to the Finance Committee. Although there are no limitations on who may be appointed Fire Coordinator, Regional Council has followed the requirements that used to exist for County Mutual Aid systems and selected the chief of the fire department with the largest number of full-time firemen -- in this case the fire chief of St. Catharines. William Bannan, Jr. was the first Coordinator and he was succeeded in June 1972 by Joseph C. Fitzgibbon. In June 1976 the Regional Council also created the new post of Deputy Regional Fire Coordinator and appointed Chief S.C. Thomson of Niagara Falls, the man who would have been coordinator of a Welland County system if Regional Niagara had not existed.

It is quite clear that the Regional Fire Coordinator has not accomplished much in the direction of regional coordination. There is no effort at inter-municipal cooperation in training, purchasing of equipment, siting of stations or defining jurisdictions. There has been no new sharing of communication facilities and the "emergency plan and program" is rudimentary. Several area fire chiefs indicated that they felt there had been little coordination by the Regional Fire Coordinator. One chief thought the Coordinator was "standing still." Another chief said that he had not even seen the Coordinator for at least two years. Of course, this probably says more about this chief (who obviously does not attend Mutual Aid Association meetings) than it does about the Coordinator, but it is an indication of the lack of coordination in the Region.

Why has the Regional Fire Coordinator not done more than he has? One simple reason is that the Coordinator already has a full-time job at the local level and the Regional Council has taken little interest in fire matters. The Coordinator reports to the Regional Finance Committee only about once a year and he is not asked the questions or given the instructions that would encourage action. The Region pays the Coordinator only \$1,500 per year and it gives him an extremely limited budget. The Region pays no compensation to St. Catharines. Since the Coordinator is also the chief of the largest fire department in the Region, he has much to do in his own municipality, and it is unreasonable to expect that he will vigorously pursue new responsibilities at the Regional level.

The more fundamental reasons for the Regional Fire Coordinator's failure to do much coordinating are the absence of statutory authority and the likely opposition from area fire departments and municipalities. Undoubtedly both of these reasons also help explain the Regional Council's lack of interest in fire protection. When Regional Councillors already have their hands full in carrying out responsibilities which are assigned to them, they are unlikely to want to create new problems for themselves.

The absence of statutory authority is perhaps the basic problem. Municipal law is usually interpreted strictly, and a local government or official has the authority to do only what the legislation specifically allows. Although it might be possible to disseminate information and engage in some common training under the Coordinator's authority to establish an emergency "plan and program", there is no specific authority to coordinate training, suggest organizational changes or initiate cooperation in other areas. The Coordinators have been very conscious of their absence of authority. Prior to the introduction of regional government there were discussions about the possible responsibilities and authority of a Regional Fire Coordinator. Mayo suggested a considerable range of responsibilities, but others disagreed. In this context, The Regional Municipality of Niagara Act indicates that the Ontario Government consciously decided on a minimal role for the Coordinator. The Government's position may be changing. Under The County of Oxford Act, 1974, sec.132,

the Oxford Fire Coordinator is specifically authorized to establish "a communications system and training facilities for firefighters." The absence of such provisions in The Regional Municipality of Niagara Act again indicates to the Niagara Regional Fire Coordinator that these matters are none of his business.

If the Coordinator were to make more effort to coordinate, there would undoubtedly be opposition from local areas and their fire chiefs. This is acknowledged by the chiefs themselves, though usually with respect to other chiefs. Part of the problem is simply that some area chiefs would resent any loss of authority in their own areas. One chief acknowledged the reality of "little empires", and another spoke of the resentment that would exist if the Coordinator tried to establish himself as the "big chief of the whole Region." There is also anxiety that more coordination would mean the disruption of an adequate system. One chief said "a city group can't run a rural area as well as a rural group can." Whether evidence would support this or not, the statement does indicate one problem. In many areas of the Region people are wary of anything connected with St. Catharines. A Fire Coordinator drawn from St. Catharines is therefore likely to be particularly suspect.

CHAPTER V

CONCLUDING OBSERVATIONS

As the foregoing pages have made clear, the Niagara Region is not without its fire protection problems. Most municipalities have areas in which improvements could be made, often at relatively little cost to the taxpayer. On an intermunicipal level, fire departments fail to maximize the use of available resources through cooperation. Communications, training, and border agreements are areas where improvements in fire protection could be achieved with little additional cost. These "problems" do not by any means constitute a crisis in fire protection. Statistics suggest that fire protection in the Niagara Region is probably as good as in most places in Ontario. However, most municipal briefs to the Review Commission contend there are no problems, and this just does not seem to be the case.

Not all blame lies with the municipalities in the Region. The current Provincial policy with regard to fire protection may also be at fault. What appears to be required at the Provincial level is a thorough review, perhaps a Royal Commission, into the whole subject of fire protection. This should include an examination of the impact of the insurance industry, the role of the Ontario Fire Marshal, and the local organization of fire protection. It may well be that the Province's whole approach to fire protection needs to be rethought. At least, amendments seem in order. For example, there is nothing unusual about municipalities being unable to reach agreement on what is a just sharing of costs for services. But in the case of buying or selling fire protection, there is no way to adjudicate disputes between municipalities, and this often leaves border areas with poor fire protection. Perhaps the Ontario Fire Marshal should play a role in this area, or perhaps disputes should go to the Ontario Municipal Board.

For the Niagara Region, the immediate question is change which might alleviate the problems without creating other problems of even greater magnitude. In general, there are three options: (1) leave responsibilities unchanged and rely on informal changes to make the existing structure work better; (2) create a Regional fire department; and (3) increase the powers of the Regional Fire Coordinator. Each of these deserves brief comment.

A. Option One: Leave Responsibilities Unchanged

Leaving the existing structure of responsibilities unchanged is certainly the simplest course of action. It is also possible that certain problems could be solved without formal changes in law. Nothing currently stands in the way of municipalities cooperating in connection with communications, training and border areas. In a genuine major emergency, the willingness of fire departments to cooperate is not a problem, but on more routine, day-to-day matters the record of voluntary cooperation is not very good. This may change in future, but one must remain sceptical.

Perhaps more public concern with fire protection would facilitate more voluntary cooperation among fire departments. Many of the current problems are ignored because very few people know about them. Fire chiefs, municipal councils and newspapers could do a better job than they do of identifying problems and evaluating the performance of the fire protection system in individual municipalities and in the Region as a whole. Recently a Grimsby councillor complained about not having the information necessary to make an informed judgement about fire protection requirements, but most municipal councils normally operate without much information. When questioned directly, several fire chiefs said they did not think their councils understood such a basic matter as the connection between fire protection facilities and insurance rates. Often fire chiefs are themselves responsible for this. At present there almost seems to be a conspiracy of silence. One does not discuss problems for fear of creating controversy or raising insurance rates. One fire chief, for example, asked apprehensively about what would be included

in this report, and he suggested that one particular problem situation (for which the chief was in part responsible) should not be reported because it could lead to increased insurance rates for the area concerned. This, of course, is a shortsighted approach. The public should have enough information that they can demand sensible solutions to what are often relatively simple problems.

B. Option Two: Create a Regional Fire Department

The creation of a Regional fire department would constitute a major change, and it is likely to be politically unacceptable at present. However, a Regional fire department is accepted by many people as inevitable in the long run, and it would solve many of the problems which exist now. Border problems would disappear, training could be standardized, inspections and safety programs could be implemented on a uniform basis, communications and dispatching could be integrated. The question is whether these advantages would be outweighed by other disadvantages. One of the main arguments against a Regional fire department has been that there are no problems now. This is not the case. Other arguments about costs and the disappearance of volunteer firemen are not particularly strong. This does not mean that there may not be reasons for rejecting regionalization as the answer. One must recognize the importance of emotion and self-interest in any political decision. It is also quite possible that a dispassionate consideration of all the relevant information would show that a Regional fire department is not a good idea.

What seems to be required for the future is a full-scale study of the advantages and disadvantages of a Regional fire department. This could include the design of a hypothetical Regional department, complete with organization, programs, station locations, equipment and manpower. Even if a Regional department were found to be unwarranted, the information generated by the study would be of considerable benefit to area departments in coordinating their activities. Although the merits of such a study seem obvious, it is not clear who could conduct it. The office of the Ontario Fire Marshal is a logical choice, and in this case direction would have to come from the Provincial Government.

C. Option Three: Increase the Role of the Regional Fire Coordinator

A middle-of-the-road approach which might well solve existing problems without taking basic responsibility for fire protection away from local municipalities would be to increase the role of the Regional Fire Coordinator. The idea would be to have the Fire Coordinator move beyond emergency situations and assume a more general coordinating role. This could include a number of staff responsibilities, while still leaving routine firefighting and service activities under the control of area fire chiefs. In terms of current terminology, the Regional Fire Coordinator would not be a Regional fire chief (except perhaps in emergency situations), but a Regional fire marshal.

The following are some of the additional responsibilities which might be vested in a Regional Fire Coordinator in the Niagara Region:

- (1) to establish a common communications system for all fire departments in the Region;
- (2) to establish training facilities and coordinate training programs for firefighters in the Region;

Powers similar to these have already been entrusted to the Oxford County Fire Coordinator under The County of Oxford Act, 1974, sec. 132. An evaluation of the Oxford County experience might prove helpful.

Other responsibilities for the Regional Fire Coordinator could include:

- (3) to assist municipalities in the Region in reaching agreements about the buying, selling and exchange of fire protection;
- (4) to assist in plan approvals and safety inspections of large structures and other facilities likely to produce emergency situations;
- (5) to develop an "automatic aid" program for fires involving large structures;

- (6) to facilitate cooperation in long-range planning and in the purchasing of equipment and supplies;
- (7) to monitor the performance of fire stations (response time, etc.), provide information to area fire chiefs, and make suggestions as appropriate;
- (8) to hold regular meetings with area fire chiefs in order to achieve the above objectives.

These responsibilities are mainly of an advisory nature and would not unduly restrict the "autonomy" of area departments. The Fire Coordinator would not take over operational responsibilities in firefighting from the area chiefs.

If the responsibilities of the Fire Coordinator and the Regional Municipality are increased, it will be necessary to give further thought to the selection of the Coordinator and to staffing arrangements. It would seem that management responsibilities could be handled in either of two general ways. One would be to appoint a full-time coordinator (or perhaps "regional fire marshal" would be a better term). Another would be to expand the present system of drawing on local fire chiefs. In this case a Regional Fire Coordinator (perhaps appointed for a fixed term with the expectation that the position would be rotated) would be assisted by a number of deputy coordinators, each with responsibility for such specific functions as communications, training and inspections. Each way has its potential advantages and disadvantages, and there are many other possible organizational arrangements to consider. The choice can be made only after defining Regional responsibilities, and the details are probably best left to the Ontario Fire Marshal and Regional Council.

APPENDIX

Comments on Fire Protection in Municipal Briefs to the Niagara Region Study Review Commission

St. Catharines

At the present time the St. Catharines Fire Department is providing communications for (9) nine fire stations located in the Towns of Niagara, Lincoln and Grimsby.

While in parts of the Region some of the fire communications are centralized, other parts of the Region are finding it difficult to provide this fire communications service. If left as a separate area municipal responsibility, demands for this service will require the assignment of staff personnel and perhaps in some area municipalities the engagement of additional staff.

History would seem to indicate that Regional involvement in operations or administration would likely increase cost with no improvement in service. It is the position of the City of St. Catharines that no consideration be given to the amalgamation of the area municipal fire departments into one operating unit, but that the Review Commission examine the feasibility of a single communications centre for the receipt of calls, the transmission of alarms and the dispatching of fire apparatus.

Niagara Falls

It is suggested that fire departments should remain the complete responsibility of the area municipalities. Municipal boundaries have not created any difficulties in providing firefighting services. Where there is a jurisdictional question, the department receiving the call will respond and proceed with firefighting measures until the appropriate department can be notified and assume control. Presently, all fire departments within the Niagara Region are connected by radio and are within a mutual aid system whereby one municipality can assist another in the event of an emergency.

Regionalization of fire services would substantially increase cost as many of the area municipalities make use of volunteer firefighters.

To equalize the remuneration scale of volunteer firefighters would be extremely costly because of the varied rates presently paid, ranging from \$900.00 per person per year to a low of \$245.00 per year. Termination of the volunteer departments might also result in a loss to the municipality of many of the community projects supported by the volunteers.

The centralization of the fire departments would require a new communication system entailing considerable expenditure of public money without a noticeable increase in the level of firefighting service.

Welland

The City of Welland strongly recommends that the fire department services be maintained by the local area municipality, with provisions to continue mutual aid cooperation with neighbouring municipalities.

Evidence of this cooperation was recently demonstrated at the fire in Port Colborne which took place at the Robin Hood Flour Mill.

Past experience indicates Regional participation in operations or administration of this type of service would likely increase the cost with no improvement in service.

Port Colborne

Recreation and fire protection responsibilities are vested with the local municipality. Both functions are best provided by the local municipality. There may be some role for regional coordination of the provision of some very special equipment. But both functions are perceived as one of local domain and are best left that way.

The regional policy plan has set as a goal the maintenance of separate urban areas, and there will be little opportunity to amalgamate fire or recreation facilities in adjoining municipalities.

It should be noted that much of the personnel for the City of Port Colborne fire department is primarily volunteers employed in local industries and businesses. A regionalized fire system would eventually destroy the volunteer function. It is unlikely that employers would continue to permit volunteers to be called out over long distances. The volunteer force is also important to a local community as a valued social organization. Pumpers may be used as backup equipment from adjoining municipalities but rescue equipment (ladder trucks and personal equipment) should be near at hand.

Respecting the provision of fire services and recreation services the City of Port Colborne recommends that:

Responsibility for fire protection remain with the local municipality and a regional presence be limited to liaison and inter-department communication.

The provision of fire protection services by volunteer forces be supported wherever possible, not only for financial reasons but for the forces' social contribution to local communities.

Town of Pelham

Fire protection to the Town is provided by a sixty man volunteer fire department contained in two stations. It is believed that it is the only volunteer fire department that has a complete training manual and our department does not have to take a back seat to anyone, even the paid departments. The Town over the last several years has expended considerable funds on updating and upgrading the firefighting equipment in the Town and now has a system established to replace the equipment yearly as the need arises to ensure that the department maintains its present high standards. The Town of Pelham would be opposed to any efforts to have fire departments amalgamated with the idea of providing one department for the Region. The cost would escalate similar to that of the police and the services would not be any better than what is received at the present time. Fire departments should be left with the local tier municipality who can best determine their requirements, type of equipment necessary and the best way to service the people.

Wainfleet

This municipality maintains a volunteer fire department of approximately thirty-five men and operates from three fire halls in different areas of the community. We suggest that fire protection remain a local area municipal function and responsibility, and that the Region be responsible for coordination through the mutual aid plan and study a communication network which might best be handled through existing radio networks such as the police communication function or be correlated to a study of a regional emergency call system such as 9-1-1.

There is a beneficial social activity connected with the volunteer fire organization which compliments the way of life in the Wainfleet community.

There is a regional association which exists to assist all local fire organizations in the area municipalities in the provision of training seminars.

The regionalization of fire services might well signal the end of the volunteer fireman and is an undertaking we could not support.

